

## **IN THE SPECIFICATION**

Please replace the paragraph starting on page 3, line 5, with the following paragraph:

Accordingly, what is needed is a more efficient system and method for selecting repeaters within the network. What is also needed is a system and method for selecting repeaters within a network. What is also needed is a system and method wherein nodes on a network which perform a particular function may be configured as repeaters (i.e., in addition to performing that function).

Please replace the paragraph starting on page 15, line 1, with the following paragraph:

At 240, the master 100 analyzes the proxy signal strength data to determine which (if any) of the newly-identified nodes should be configured as a second tier repeater. Once again, this decision may be based on where the signal strength values fall within predetermined minimum and maximum signal strength thresholds (as with selection of the first tier of repeaters described above). Thus, node 112 in the illustrated example may be too close to repeater candidate 111 to be properly selected as a repeater (i.e., signal strength may be above the maximum value) but node 113 may be a sufficient distance away to make it an ideal repeater candidate (i.e., within both the minimum and maximum threshold requirements).

Please replace the paragraph starting on page 15, line 11, with the following paragraph:

Once the master 100 has identified the second tier (or Nth tier) of repeater candidates, at 245 it instructs each of the nodes in the second tier to collect proxy return signal strength data for nodes that have yet to be identified. At 250, the master 100 receives the latest set of proxy return signal strength data and (if any new nodes have responded, determined at 255) analyzes the data to identify the next (e.g., the third) tier of repeater candidates. The master 100 proceeds through successive tiers in this manner (i.e., tier  $N=N+1$  with each iteration, as set forth in box 257) until no new nodes are identified using the proxy return signal strength commands. At this point, one embodiment of the system and method proceeds to the flowchart illustrated in **Figure 2b**.

Please replace the paragraph starting on page 16, line 1, with the following paragraph:

At 265, the master 100 determines whether all nodes on the network have responded. If all nodes are accounted for, then the process is complete at 267 (i.e., all nodes are identified and all repeaters have been assigned). If, however, certain nodes have not responded, then the master 100 selects additional first tier repeater candidates in an effort to locate these nodes. Accordingly, the master 100 may select nodes which have signal strength values above the preset maximum 350.

Please replace the paragraph starting on page 16, line 8, with the following paragraph:

Returning to the particular example illustrated in **Figure 3**, the master 100 may select any or all of nodes 101, 121-122, and 131 as new first tier candidates. In one embodiment, the master 100 selects nodes at a signal strength value in the vicinity of one half of the maximum threshold value 350, to increase the likelihood of identifying additional nodes.

Please replace the paragraph starting on page 16, line 13, with the following paragraph:

At 275, the master 100 instructs the new first tier repeater candidates to collect proxy return signal strength data from any nodes which have not yet responded. Thus, if node 131 is selected, it may attempt to collect signal strength data from nodes 132-134; and if node 121 is selected, it may attempt to collect signal strength data from node 125. The master 100 continues to select new first tier candidates until new nodes have been identified (determined at 280).

Please replace the paragraph starting on page 16, line 19, with the following paragraph:

Once new nodes respond, the process of searching through successive tiers begins again at 230, where the master 100 receives a new set of proxy return signal strength data from the new first tier repeater candidate(s). The master 100 then works its way through successive tiers as described above until no new nodes are

responding (determined at 255). When all nodes have been identified (determined at 265) the process is complete (at 267).

Please replace the paragraph starting on page 29, line 9, with the following paragraph:

Various authentication techniques may be implemented to provide for secure message transmission across the network. In one embodiment, authentication, like priority, may be inherited. In this embodiment, each hop may be authenticated separately. For example, the first proxy repeater 510 may challenge the proxy source 500 and receive a successful reply before relaying the proxied message on to the next proxy repeater 510 or proxy agent 520.

Please replace the paragraph starting on page 29, line 15, with the following paragraph:

In one embodiment, in order to support changing of authentication keys, an authentication key may be embedded in a proxy message header for the proxy agent 520 to use when communicating with the proxy target 530. This configuration handles the case where the agent 520 and target 530 have different authentication keys (presumably only temporarily). In one embodiment, the proxy source 500 ensures that authentication keys are the same in the intermediate points of the proxy chain (e.g., the proxy repeaters 510) before using authentication. The proxy agent 520 of one embodiment is capable of using the authentication key only for that outgoing transaction rather than changing its own key.

Please replace the paragraph starting on page 30, line 10, with the following paragraph:

In one embodiment, unacknowledged broadcast and group messages are handled in a special way. In this case, each proxy repeater 510 may serve as both a proxy agent and a proxy repeater. When a proxy repeater 510 identifies an unacknowledged broadcast or group message as the message to be delivered by the proxy agent 520 (by peeking ahead to the end of the proxy header), it first sends the message as if it were a proxy agent 520 and then relays the message on to the next proxy repeater 510 or proxy agent 520.

Please replace the paragraph starting on page 32, line 2, with the following paragraph:

The proxy source 500 may be supplied with a routing table containing for each unicast address (subnet/node or node ID), a list of repeaters 510 and the agent 520 to use to reach that address (e.g., perhaps a null set), as well as a first choice path to use at each hop. For multicast addresses, the list may contain the set of agents 520 to which the multicast is to be delivered.

The above amendments do not add any new matter. They merely correct typographical errors.